

WHAT IS CLAIMED IS:

1. A server for establishing communication upon receipt of access from a client terminal through a network, comprising

a memory protection unit for protecting data stored in a volatile memory to be protected, in the event of a power failure,

said memory protection unit comprises

power monitoring means for detecting a power failure supplied to said above protective memory, and

switch controlling means for switching a control and power supply toward said protective memory, wherein

when a failure is detected in the power supplied to said protective memory, the control toward said memory is switched to a side of said memory protection unit and said power supply is switched to a standby power before said protective memory has some damaging effect.

2. The server as set forth in Claim 1, wherein said switch controlling means

finishes the switching, returns the control toward said memory to a CPU, and returns said power supply to an ordinal one, after solution of the power failure.

3. The server as set forth in Claim 1, which
notifies the client of write completion of data
at a time when the data sent from said client has been
written into said protective memory.

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4. The server as set forth in Claim 1, which
checks whether said last termination is abnormal
or normal, at the activation,

instructs said memory protection unit to return
said protective memory after memories other than said
protective memory are initialized at the activation,
when said last termination is abnormal, while

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instructs said memory protection unit to return
said protective memory and thereafter initializes all
the memories at the activation when said last
termination is normal.

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5. The server as set forth in Claim 1, wherein
said switch controlling means
switches said memory to a low power mode at a
time of switching said power supply toward said memory
to the standby power.

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6. The server as set forth in Claim 1, wherein
said memory protection unit
performs backup processing on the data stored in
said memory, in response to a user's operation, after

5 the switching.

7. The server as set forth in Claim 1, wherein
said protective memory is SDRAM or DIMM.

8. The server as set forth in Claim 1, wherein
said memory protection unit
has a switch on an I2C bus between SPD of said
protective memory that is the DIMM and a memory
5 controller, to cut off a connection between the SPD and
the memory controller, in the above switched state.

9. The server as set forth in Claim 8, wherein
said memory protection unit
controls said SPD of said protective memory
through said I2C bus.

10. The server as set forth in Claim 1, wherein
said server unit is Network Attached Storage or
File Server.

11. A computer system for establishing mutual
communication between a client terminal and a server
through a network, wherein

said server

5 has a memory protection unit for protecting data
stored in a volatile memory to be protected in the event

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of a power failure,

10 said memory protection unit comprising
 power monitoring means for detecting a power
failure supplied to said above protective memory, and
 switch controlling means for switching a control
and power supply toward said protective memory, in which
 when a failure is detected in the power supplied
to said protective memory, the control toward said
15 memory is switched to a side of said memory protection
unit and said power supply is switched to a standby
power before said protective memory has some damaging
effect.

12. The computer system as set forth in Claim 11,
wherein

 said switch controlling means
 finishes the switching, returns the control
5 toward said memory to a CPU of said server, and returns
said power supply to an ordinal one, after solution of
the power failure.

13. The computer system as set forth in Claim 11,
wherein

 said server
 notifies said client of write completion of data
5 at a time when the data sent from said client has been
written into said protective memory.

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14. The computer system as set forth in Claim 11,
wherein

said server

checks whether said last termination is abnormal
or normal, at the activation,

instructs said memory protection unit to return
said protective memory after memories other than said
protective memory are initialized at the activation,
when said last termination is abnormal, while

instructs said memory protection unit to return
said protective memory and thereafter initializes all
the memories at the activation when said last
termination is normal.

15. The computer system as set forth in Claim 11,
wherein

said switch controlling means

switches said memory to a low power mode at a
time of switching said power supply toward said memory
to the standby power.

16. The computer system as set forth in Claim 11,
wherein

said server is Network Attached Storage or File
Server.

17. A memory management method of a server for establishing communication upon receipt of access from a client terminal through a network, comprising the following steps of:

5 detecting a power failure supplied to said above protective memory, and

switching a control and power supply toward said protective memory, in which

10 when a failure is detected in the power supplied to said protective memory, the control toward said memory is cut off from a CPU and said power supply is switched to a standby power before said protective memory has some damaging effect,

15 so as to protect the data stored in said protective volatile memory, in the event of a power failure.

18. The memory management method as set forth in Claim 17, further comprising

5 a step of finishing the switching, returning the control toward said memory to a CPU, and returning said power supply to an ordinal one, after solution of the power failure.

19. The memory management method as set forth in Claim 17, further comprising

a step of notifying said client of write

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5 completion of data at a time when the data sent from
said client has been written into said protective memory.

20. The memory management method as set forth in
Claim 17, further comprising:

a step of checking whether said last termination
is abnormal or normal, at the activation;

5 a step of returning said protective memory after
initializing memories other than said protective memory
at the activation, when said last termination is
abnormal; and

10 a step of returning said protective memory and
thereafter initializing all the memories at the
activation when said last termination is normal.

21. The memory management method as set forth in
Claim 17, further comprising

5 a step of switching said memory to a low power
mode at a time of switching said power supply toward
said memory to the standby power.

22. The memory management method as set forth in
Claim 17, further comprising

5 a step of performing backup processing on the
data stored in said memory, in response to a user's
operation, after the switching.

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23. The memory management method as set forth in Claim 17, wherein

said protective memory is SDRAM or DIMM.

24. The memory management method as set forth in Claim 17, further comprising

a step of, with a switch provided on an I2C bus between SPD of said protective memory that is the DIMM and a memory controller, cutting off a connection between the SPD and the memory controller, in the switched state.

25. The memory management method as set forth in Claim 24, further comprising

a step of controlling said SPD of said protective memory through said I2C bus.

26. A memory management program of a server for establishing communication upon receipt of access from a client terminal through a network, comprising the following functions of:

detecting a power failure supplied to a protective memory, and

switching a control and power supply toward said protective memory, in which

when a failure is detected in the power supplied to said protective memory, the control toward said

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memory is cut off from a CPU and said power supply is switched to a standby power before said protective memory has some damaging effect,

15 so as to protect the data stored in said protective volatile memory, in the event of a power failure.

27. The memory management program as set forth in Claim 26, further comprising

5 a function of finishing the switching, returning the control toward said memory to said CPU, and returning said power supply to an ordinal one, after solution of the power failure.

28. The memory management program as set forth in Claim 26, further comprising

5 a function of notifying said client of write completion of data at a time when the data sent from said client has been written into said protective memory.

29. The memory management program as set forth in Claim 26, further comprising:

5 a function of checking whether said last termination is abnormal or normal, at the activation;
 a function of returning said protective memory after initializing memories other than said protective memory at the activation, when said last termination is

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abnormal; and

10 a function of returning said protective memory
and thereafter initializing all the memories at the
activation when said last termination is normal.

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